[X] First Class Mail or [] Express Mail Certificate

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re Application of: SUNDARAM, Mani et al.

Group Art Unit: 2878

Serial No.

10/803,295

Examiner:

Filed:

03/18/2004

Atty. Dkt. No: 20030127-US

For: QWIP WITH ELECTRON LAUNCHER FOR REDUCING DIELECTRIC RELAXATION EFFECT IN LOW BACKGROUND CONDITIONS

To:

Mail Stop Amendment Commissioner for Patents Fm:

24222

PO Box 1450

Alexandria, VA 22313-1450

CERTIFICATE OF MAILING 37 CFR 1.8: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as FIRST CLASS MAIL addressed to: Mail Stop Amendment, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450

Date:

X Dawn M. Case

Commissioner:

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

Transmitted herewith is the Applicant's Information Disclosure Statement, 2 sheets form PTO/SB/08A and/or PTO/SB/08B, and __5_ references and other information. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003. Please enter in the above application and communicate in all related matters with the undersigned.

DEPOSIT ACCOUNT 190130 AUTHORIZATION – All necessary fees are intended to be included, however the Office is hereby authorized to charge any deficiency or credit any overpayment in the fees to the above deposit account, owned by BAE SYSTEMS Information and Electronic Systems Integration Inc. an authorized signator for which is Kevin M. Perkins, V.P. & Company Counsel, and for whom the undersigned are authorized agents.

Cus. No. 24222

Maine & Asmus

PO Box 3445

Nashua, NH 03061-3445

Tel. No. (603) 886-6100, Fax. No. (603) 886-4796

Info@maineandasmus.com

Scott J. Asmix, Reg. No. 42.26

Neil F. Maloney, Reg. No. 42,83 Andrew P. Cernota, Reg. No. 52,711

Attorneys/Agents for Applicant

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: SUNDARAM, Mani et al.

Group Art Unit: 2878

fial No.

10/803,295

Examiner:

Filed:

03/18/2004

Atty. Dkt. No: 20030127-US

For: QWIP WITH ELECTRON LAUNCHER FOR REDUCING DIELECTRIC

RELAXATION EFFECT IN LOW BACKGROUND CONDITIONS

To:

Mail Stop Amendment Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Fm: 24222

CERTIFICATE OF MAILING 37 CFR 1.8: I certify that this correspondence is being deposited on the below date with the U.S. Postal Service with sufficient postage as FIRST CLASS MAIL addressed to: Mail Stop Amendment, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450

Date: CHO

[X] Dawn M. Case

Commissioner:

INFORMATION DISCLOSURE STATEMENT

Applicants submit this statement and the attached 2_sheet(s) of form PTO/SB/08A and/or PTO/SB/08B and 5_references and other information in accordance to the duty of disclosure under 37 C.F.R. §§1.56,1.97, and 1.98, and requests consideration hereof. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003.

Compliance with 37 C.F.R. §1.97: This Information Disclosure Statement is filed within three (3) months of the filing date of a National Application or before the mailing date of a first office action on the merits. No fee or certification is required.

<u>Information Cited:</u> The Applicants hereby make of record in the above-identified application, the information listed on the attached form PTO/SB/08A and/or PTO/SB/08B. The order of presentation of the references should not be construed as an indication of the importance of the reference. As all the references listed on attached Form PTO/SB/08A and/or PTO/SB/08B are in English, no commentary is required.

<u>Remarks:</u> A copy of each reference, together with a listing on Form PTO/SB/08A and/or PTO/SB/08B, is submitted herewith. Applicants respectfully request that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

- 2. The enclosed form PTO/SB/08A and/or PTO/SB/08B be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application; and
- 3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined in 37 C.F.R. §102.

Notwithstanding any statement by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Cus. No. 24222 Maine & Asmus PO Box 3445

Nashua, NH 03061-3445

Tel. No. (603) 886-6100, Fax. No. (603) 886-4796

Info@maineandasmus.com

Respectfully submitted

Scott J. Asmus, Reg. No. 42,269

Neil F. Maloney, Reg. No. 42,833

Andrew P. Cernota, Reg. No. 52,711

Attorneys/Agents for Applicant

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO THAT

Sheet 1

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

of 2

Complete if Known				
Application Number	10/803,295			
Filing Date	03/18/2004			
First Named Inventor	SUNDARAM, Mani et al.			
Art Unit	2878			
Examiner Name				
Attorney Docket Number	20030127-US			

			U. S. PATEN	T DOCUMENTS		
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		^{US-} 5,384,469	01-24-1995	Choi		
		^{US-} 6,211,529 B1	04-03-2001	Gunapala et al.		
		US-				
		US-		·		
		US-				
	•	US-				
		US-				
•		US-				
		US-				
	i	US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				
		US-				

FOREIGN PATENT DOCUMENTS							
	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages		
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	Ĺ	
					·	L	
						1	
						I	
						Ļ	
						1	
						1	

Examiner	Date	
Signature	Considered	

"EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/08B (08-03) Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO		Complete if Known		
000000000000000000000000000000000000000			Application Number	10/803,295
INFORMATION DISCLOSURE			Filing Date	03/18/2004
STATEMENT	BY A	PPLICANT	First Named Inventor SUNDARAM, Mani et al.	
			Art Unit	2878
(Use as many sheets as necessary)		Examiner Name		
Sheet 2	of	2	Attorney Docket Number	20030127-US

Examiner	NON PATENT LITERATURE DOCUMENTS xaminer Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of				
Initials*	No.1	the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²		
		GUNAPALA, SARATH et al., "MQW Based Blocked Intersubband Detector for Low Background Operation", NASA Tech Briefs, July 2001, pp 1-2, NPO-21073, NASA's Jet Propulsion Laboratory, Pasadena, CA.			
		BANDARA, SUMITH et al., "Quantum Well Infrared Photodetectors for Low Background Applications", www.eps.org, March 2001, p.1, Jet Propulsion Laboratory.			
		GUNAPALA, S. et al., "Quantum Well Infrared Photodetector (QWIP) Focal Plane Arrays", Semiconductors and Semimetals,1999, pp 1-83, vol. 62.			
		GUNAPALA, S. et al., "640X486 Long-wavelength Two-color GaAs/AlGaAs Quantum Well Infrared Photodetector (QWIP) Focal Plane Array Camera", pp 1-24.			
		GUNAPALA, S. et al., "640X512 Pixel Four-Band, Broad-Band, and Narrow-Band Quantum Well Infrared Photodetector Focal Plane Arrays", pp 1-12.			

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.